

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

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Rudolf A. Maria**

Serial No. **10/564,046**

Filed: **January 9, 2006**

Confirmation No. **5764**

For: **CARBON-SUBSTITUTED METHYL
AMINE DERIVATIVES AND THEIR
USE AS A RHEOLOGY CONTROL
AGENT**

§ Group Art Unit: **1796**

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§ Examiner: **NGUYEN, Haidung D.**

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§ § 371 Date: **May 1, 2006**

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§ Attorney Docket No.: 00307.0043.PCUS00

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REQUEST FOR PRE-APPEAL BRIEF REVIEW

Commissioner for Patents

P. O. Box 1450

Alexandria, Virginia 22313-1450

In response to the Advisory Action dated June 01, 2010, and in preparation for drafting of the Appeal Brief, Applicant submits the following remarks for consideration upon pre-appeal review.

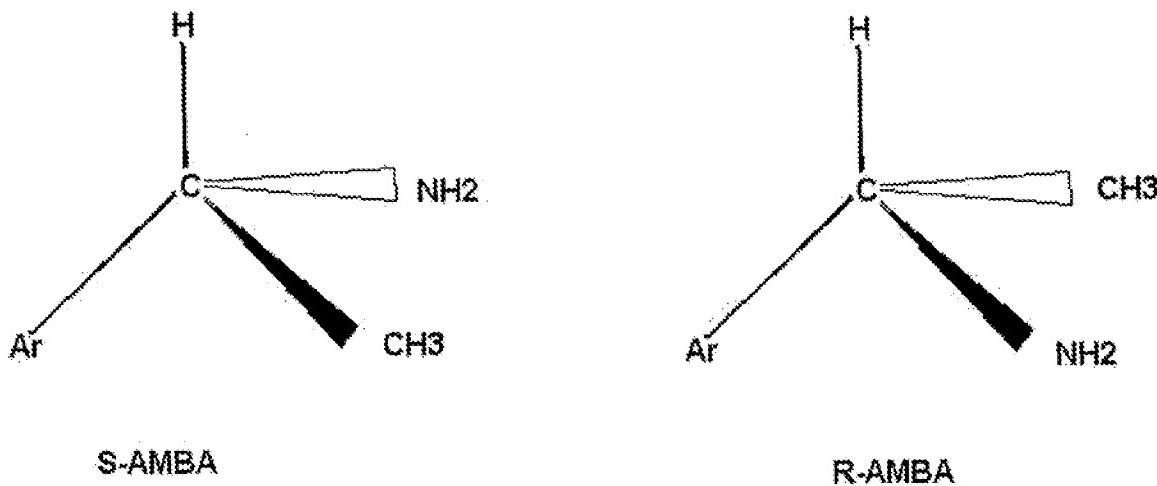
REMARKS

Applicants respectfully request review of the following:

Enantiomeric excess is NOT an inherent property – specifically, the Examiner fails to recognize that the reaction products of amines and isocyanates, where either the amine or the isocyanate is optically active and present in enantiomeric excess, **are structurally different** than isocyanates and amines of non-optically active components, and of reaction products of amines and isocyanates, that while one or the other is optically active, is not present in enantiomeric excess.

The stereochemistry of an S-monoamine is different from that of a R-monoamine. The drawing below illustrates this. When the amine group of SAMBA and RAMBA react with a polyisocyanate, the reaction product is the same in terms of chemical composition, but they are a mixture of sterically different polyurea molecules; for example: S-PI-S, S-PI-R, R-PI-R.

The steric properties (the shape) of a molecule is important in crystallisation because in crystallisation only molecules or combination of molecules with the same shape can be fit into a regular crystal lattice. The inventors have found that in the product of the invention starting from an excess of SAMBA over RAMBA (or visa versa) the regularity of crystallisation process is disturbed and the shape and size of the obtained crystal particles have been changed and moreover that the modified polyurea crystal particles have improved thixotropic properties over non-chiral products or racemic mixture products.



Paragraphs 0006 and 0007 of Kurosaki (translated) does not disclose the same reaction products of amines and isocyanates as in claim 1

Paragraph 0006 relates to the first invention of Kurosaki: an epoxy resin made by reacting isocyanates and alicyclic amine. None of the alicyclic amines mentioned in paragraph 0006 of the translated Kurosaki are primary and therefore not relevant to the patentability of the claimed invention under formula 1. As indicated in the formula I of the claimed invention, the amine must be a primary amine which is adjacent to the chiral carbon (C*). The only examples of isocyanates given in paragraph 0006 are diisocyanates, and so therefore are also not relevant under formula II of the claimed invention.

Paragraph 0007 relates to the 2nd invention of Kurosaki: an isocyanate compound (preferably tolylene diisocyanate) and a low-grade dialkyl amine (see paragraph 0007). A dialkyl amine is not a polyamine, and so not relevant under the second half of the invention (optically active monoisocyanates reacted with polyamines). The dialkyl amines are excluded from the first ½ of the claimed invention (optically active carbon substituted methylamines reacted with polyisocyanates) since they are not primary amines, and formula 1 is limited to primary amines.

Kurosaki does not show all the claim limitations except a property or function.

The Examiner has failed to show how Kurosaki shows the following:

- rheology modification agents
- obtainable by a reaction product between isocyanates and amines according to formula I or amines and isocyanates according to formula II
- optical activity at all
- any disclosure or teaching of enantiomeric excess of optically active compounds

Clearly the burden of proof still lies with the Examiner, contrary to the Examiner's statement on page 3 of the office action.

Kurosaki's teaching (or lack thereof) of "improve [sic] temperature sensitive compositions" is irrelevant (page 3 of the Advisory Action). Temperature sensitive compounds made according to a different reaction than what is taught in the claimed invention for a different purpose (hardening acceleration) is wholly irrelevant from the claimed invention.

The combination of Kurosaki and Buter does not teach or disclose all the claimed limitations of the invention.

Buter teaches conventional sag control agents. Kurosaki teaches different amine and isocyanate reactions than in the claimed invention, and has nothing to do with rheology modification at all – rather, it teaches curing accelerators – which as far as Applicants can tell from the Kurosaki translation, is wholly irrelevant from rheology modification.

Neither reference even acknowledges optical activity at all, let alone that optical activity in the reaction products that provide a rheology modification agent can be used as a knob to provide superior thixotropic properties. As such, the references together fail to render the claimed invention obvious.

Applicants believe the application is allowable and therefore request withdrawal of the Examiner's rejections.

Extension of Time

Any extension of time that may be deemed necessary to further the prosecution of this application is hereby requested.

Authorization to Charge Fees

The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 08-3038, referencing the docket number shown above.

Authorization to Communicate via email

Pursuant to MPEP 502.03, authorization is hereby given to the USPTO to communicate with Applicant's representative concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file. Applicant's representative, Coraline J. Haitjema, can be reached at email address haitjemac@howrey.com.

The Examiner may also contact the undersigned by telephone at the number given below in order to resolve any questions (note, this telephone number is an Amsterdam phone number, Amsterdam time is 6 hours ahead of US east coast time).

Respectfully submitted,

/cjhaitjema/

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